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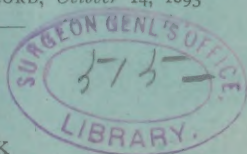
AND DANGERS OF POST-NASAL PLUGGING

BY

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PROFESSOR OF OTOLGY AND LARYNGOLOGY IN THE NEW ORLEANS POLYCLINIC;
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Reprinted from the MEDICAL RECORD, October 14, 1893



NEW YORK

TROW DIRECTORY, PRINTING AND BOOKBINDING CO.

201-213 EAST TWELFTH STREET

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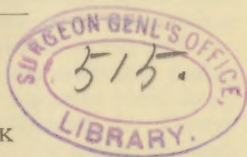
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CASES OF ALARMING EPISTAXIS OF GRIPPAL ORIGIN, AND DANGERS OF POST-NASAL PLUGGING.¹

WITH but limited time wherein to justify the honor conferred upon me to appear before this meeting, I have hurriedly collected my notes on a few cases of serious epistaxis of grippal origin. My only justification in selecting a subject so frequently discussed as epistaxis lies in the fact that its connection with the pandemic visitation of influenza needs more than the passing notice given it by modern observers. I hope, also, to elicit your views and experience on this subject, and to affirm your condemnation of the still too general practice of post-nasal plugging in cases of hemorrhage.

CASE I.—My first case is the one of Mr. B——, a lawyer, aged thirty-eight years, married, who has always enjoyed a strong and healthy constitution until December, 1890, when he is stricken down with an attack of influenza which leaves after it severe and frequent headaches. A year after, on January 29, 1892, patient is again taken sick with a second attack of influenza of a more violent type, characterized, this time, by unusual febrile and nervous excitement. When scarcely convalescent, during the night of March 4th, Mr. B—— begins to bleed freely from his left nostril. His family physician, Dr. George K. Pratt, is called upon at once. On arrival he finds that the bleeding, after lasting fifteen minutes, has

¹ Accepted as a candidate's thesis for Fellowship in the American Laryngological Association.

stopped spontaneously, to return, however, that morning in a more violent form, notwithstanding the use of a very hot solution of tannin. In the absence of Dr. Pratt, Dr. Charles Chassaingnac is hurriedly sent for, as patient's weakness is quite marked. Other general methods having failed, the doctor concluded to use a piece of gauze somewhat in the umbrella fashion ; in this glove-like hollow, absorbent cotton was packed.

Hemorrhage had discontinued when Dr. Pratt came in, but started again during consultation of attending physicians, when it was decided to plug posteriorly and then anteriorly. The right nostril began to bleed ; had therefore to be plugged anteriorly. Blood then found its way through the nasal canal at the puncta lacrymalia, and at intervals in the throat, and also externally.

March 5th.—I then visited the patient in the morning at the request of the attending physicians. Found him weak, but hemorrhage having stopped at that time, advised a plan of expectation and his removal to the Eye, Ear, Nose, and Throat Hospital in case of recurrence.

Hemorrhage recurred in the afternoon, when he was brought to the hospital at 4 P.M., where he was received by my friend and assistant, Dr. Charles J. Landfried, to whom I am greatly indebted for his valuable collaboration in the management of the case and for some of the clinical notes thereon.

After removal of plugs Mr. B—— bled profusely. The nostrils were washed with a solution of boracic acid in very hot water, a twenty per cent. solution of cocaine made use of, and the seat of the hemorrhage located at the posterior part of the nares on the crest of a septal ridge, on a line with the inferior turbinated body.

The hemorrhage was practically controlled with the galvano-cautery, but the patient was so thoroughly exhausted that I thought it advisable to proceed at once with a continuous antero-posterior packing. A strip of iodoform gauze, doubled on itself, is carefully but quickly

inserted between the opposing surfaces, and the ends are firmly matted down with a flat applicator in the lower meatus, taking care, however, not to push the gauze back any farther than the choana. The packing is continued until it has reached the upper limit of the ridge. To insure its fixity, it is built upon with additional strips until the middle turbinated body is reached, when the gauze is inserted in the crevices between that organ, on one part, and the septal and lateral walls of the nostril on the other. The dressing is completed by filling up the left nasal chamber with strips of gauze.

Upon examination the right nostril is found comparatively free, but the drums in both ears are found to be highly hyperæmic, and the patient complains of severe pains. That night both ears began to discharge a sero-sanguinolent liquid.

March 6th.—The hemorrhage having recurred it was quickly controlled by a new packing.

March 9th.—Packing removed and nostrils properly irrigated.

March 12th.—A renewal of the bleeding takes place, when it is thought necessary to proceed to a third continuous antero-posterior packing, this time in bed on account of the extreme weakness of the patient. This third dressing was left *in situ* five or six days, and allowed to eliminate itself spontaneously, the precaution being taken to cut the ends of the strips of gauze as they present themselves in the oro-pharynx, or at the entrance of the nostril. I will mention that during all this time patient evidenced signs of mastoid implication on the left side, this trouble being finally corrected by appropriate treatment of the ear.

March 16th.—Mr. B—— is seized with fever, which is the initial symptom of an attack of pseudo-rheumatism presenting the form of subacute polyarthritides, approaching in their onset and character infectious pseudo-rheumatism.

March 28th.—Patient is considered sufficiently well to be removed to his home, where his family physician had to contend against a return of the rheumatism during three days.

March 29th.—Was only then able to visit his office on crutches. Had by this time lost fifty pounds. Was subsequently treated for his hypertrophic rhinitis and nasal spur.

To-day, only, more than one year since his grippe and epistaxis, is Mr. B—— beginning to feel like himself. It is to be noted, though, that his violent and frequently recurring headaches, which had followed his first attack of influenza, have never returned from the date of his final hemorrhage.

CASE II.—Dr. H——, aged sixty, of sound parentage, an inveterate smoker of cigarettes, is a sufferer of chronic rhino-pharyngo-laryngitis, but very active and in every other respect of a healthy constitution. No history of any previous hemorrhage. Was scarcely convalescent from a severe attack of influenza, which was at that time raging in his locality, when, on January 13th, he was seized, while blowing his nose, with a severe epistaxis. The hemorrhage was so abundant and so persistent, notwithstanding all the attempts made to stop it, that the doctor concluded to take the train to New Orleans with the intention of coming to the Eye, Ear, Nose, and Throat Hospital.

The bleeding became so violent on the train, and the patient was so weak, that upon arriving at the depot his friends hastily repaired with him to the Charity Hospital, a short distance off.

My colleague, Dr. R. Matas, who was at the time in attendance in his wards, at once took charge of the case, and considering the abundance and the duration of the epistaxis, as also the extreme pallor and weakness of the patient, concluded to plug at once the posterior nares on the affected side ; both nostrils had also to be plugged

anteriorly. Then only did the hemorrhage stop. The patient was then transferred to the Hôtel Dieu. Five days after I was asked to join my *confrère* in consultation. The posterior plug, which was found firmly impacted, was removed by means of a curved post-nasal forceps. It was impregnated with a foul discharge of a very offensive odor. A severe purulent rhino-pharyngitis and a double otitis media suppurativa were not long in developing, and required the careful attention and constant direction of one of my assistants, Dr. Charles J. Landfried, before the double complication could be mitigated. Our patient's general condition was then thoroughly examined into without finding any organic trouble. The day after the removal of the plugs a swelling of a reddish, shiny appearance was noticed on the left side of the bridge of the nose, near the inner angle of the eye. It was the beginning of an attack of erysipelas, which was ushered in by a high fever and delirium. The disease travelled all around the face and scalp, and during twenty days we more than once despaired of the life of our *confrère*.

A month after his discharge I had occasion to make a careful rhinoscopic examination, which revealed the existence of a rhino-pharyngo laryngitis, with a well-defined septal ridge in the affected nostril, which impinged on the corresponding swollen inferior turbinated body in the rear part of the nasal cavity. The right side was rather roomy.

A treatment of this local condition was advised, but not followed, owing to the anxiety of the doctor to return to his practice. When last heard from he informed me that in September last he had a recurrence of the hemorrhage lasting ten hours, which he finally controlled by an antero-posterior plugging with absorbent cotton. He adds that it has taken him more than a year to recover his former strength.

CASE III.—Mr. G——, a clerk, aged forty-five, in en-

joyment of good health, is stricken down with an attack of influenza in the early days of March, 1892. Had scarcely resumed his occupation when, on March 26th, he is taken with a violent hemorrhage of the left nostril. Dr. Samuel Logan, his family physician, being indisposed, Dr. F. W. Parrham is called in, and after packing the nostril with absorbent cotton controls the bleeding for the time being, and advises him to consult me. The next morning patient is awakened by a recurrence of the epistaxis, the blood finding its way this time into the throat and other nostril. He comes to my office in a state of great exhaustion, and is immediately directed to the Eye, Ear, Nose, and Throat Hospital, where, with the assistance of Dr. Charles J. Landfried and the resident surgeons, the nostril is cleaned and irrigated with a hot boracic acid solution and rubbed with a twenty per cent. solution of cocaine, as is also the posterior surface of the velum. A septal ridge is found running backward, where it comes in contact with the inferior turbinated body. It is from this point of contact that the blood is oozing. As in Case I., the opposing surfaces are touched with a hot electrode and cauterized until the hemorrhage is stopped.

In this case, to obtain a firmer packing and to obviate the tendency of the gauze to slip back, I made use of a temporary post-nasal plug of wet absorbent cotton, which being larger than the choana was tightly drawn against it by means of the thread kept against the floor of the nostril, and held out through the anterior nostril by an assistant. It is with this wall to work against that I proceeded, as in Case I., to build a continuous antero-posterior packing until the whole nasal chamber was plugged firmly behind and more loosely in front. The post-nasal plug of absorbent cotton is then easily removed, when, by posterior rhinoscopy and retraction of the velum with Voltolini's palate retractor, the packing can be seen nicely and solidly in place. I had formerly

made use of it to advantage in cases of intra-nasal operations in children, to whom I had to administer chloroform, with a view of shutting out the blood in the recumbent portion from the naso-pharynx.

No unpleasant symptoms followed the manipulation; at no time was there even a temporary hyperæmia of the drum, nor any fever, nor, in fact, much inconvenience, with the exception that on the third day a strip of gauze found its way into the post-nasal space and slipped down into the pharynx, where it had to be cut through the mouth. This had to be done several times, when, on the fifth day, the remnants of the gauze were removed and the nostrils cleansed and irrigated. No recurrence of the hemorrhage from that date. Patient left the hospital on April 10th with nasal breathing very much improved to what it was previous to his sickness.

CASE IV.—Miss C. N——, aged seven, of a decidedly brunette type, has always been a healthy child; had a light case of measles two years ago. Two months after, she received a blow on the right side of her nose with a square block of a toy game of patience, hurled at her by a younger sister. This accident was immediately followed by a light epistaxis, this being the first bleeding she ever was subject to.

As a result of this accident, according to the mother's statement, her nasal breathing became somewhat labored; her nostrils block as if she had a cold in the head, and the secretion of the nose, offensive at times, would occasionally determine an erythematous or eczematous eruption at the entrance of the nose.

January 24th.—The child is taken sick with an attack of influenza, with fever and predominance of catarrhal symptoms, for which quinine and appropriate treatment is administered by Professor E. Souchon, the family physician.

January 27th.—At 5 A.M. patient began to bleed from the right nostril, the hemorrhage seemed to stop after a

little while, when all at once, one hour after, the child vomits a large quantity of blood, and continues to bleed for two hours, mostly from behind. When the family attendant arrives he finds that the hemorrhage has stopped spontaneously. The little patient is very pale and weak, but the fever, previously high, has subsided with the epistaxis.

January 28th.—She is comparatively well and plays all day in bed. At night hoarseness and croupy cough.

January 29th.—Fever has returned, and is accompanied with an incessant cough.

January 30th.—The fever, which continues quite high, is reduced with a small dose of phenacetin, administered in place of the quinine.

At 4 P.M. there is a recurrence of the hemorrhage from the same nostril, at first in front, but soon after from the back of the throat, the child swallowing the blood to vomit it in large clots. Upon the advice of Professor Souchon I am sent for, in order to make an examination of the nostril. The child, when I arrived, had moderate fever and a decided laryngo-bronchial cough, no pulmonary complication, but was bleached and very weak. Blood was trickling in the throat along the back surface of the posterior wall of the pharynx.

An anterior plug of absorbent cotton, soaked in a ten per cent. solution of cocaine was inserted in the nostril and secured firmly against the cartilaginous septum, with no other effect than to perhaps increase the post-nasal bleeding. The whole length of the nostril was then thoroughly cocained with cotton wrapped around a flat applicator, and soaked in the solution. A stenosed condition was found in the posterior half, especially of the lower meatus and region of the inferior turbinated body.

That condition, the age of the patient, and poor illumination made it impossible to exactly localize the seat of the bleeding, beyond the fact that it originated in the rear part of the cavity.

It was stopped only after a careful packing, so far back as seemed advisable, with two strips of iodoform gauze firmly matted down on the floor of the nostril, and built up until the middle turbinated body was reached.

January 31st.—Fever has subsided to return again the next day, when quinine was administered.

February 3d.—Professor Souchon removes the anterior strip of gauze, which was beginning to slip out and was worrying the child. No hemorrhage.

February 4th.—Although very weak, patient is brought to my office; I then removed the deep antero-posterior plug of gauze and proceeded to a thorough examination of the nostril with a bright reflected sunlight and a five per cent. solution of cocaine. Was quite surprised to find a marked osteo-cartilaginous septal ridge impinging, more particularly in the back of the nostril, on a turgid but comparatively pale inferior turbinated body, on which cocaine seemed to have little or no effect.

From that day up to February 21st patient seemed to be doing fairly well—tonics are administered and highly nutritious food taken. She is brought hurriedly to my office by her grandmother's nurse, as the hemorrhage has returned again, mostly from behind. This is stopped with the galvano-cautery applied over the crest of back part of ridge, and also opposite surface of superior turbinated body.

For greater safety the nostril is again packed with three continuous antero-posterior plugs of iodoform gauze. A slight fever and watery oozing followed for two or three days after this procedure, probably as a reaction of the galvano-cautery. The slough was eliminated on the eighth day, when the plugs are removed and the mother is instructed to keep the child's nostrils cleaned and properly disinfected.

At no time did any unpleasant symptoms follow the local treatment, but the weakness of the child was so pitiable, her complexion so waxy, the anæmia so acute, almost

pernicious, I may say, that although the urine revealed nothing abnormal, I advised that an examination of the blood be made, the spleen and liver examined, and the child sent out to the country as soon as possible, regardless of any risk that might be taken by a return of the hemorrhage, which, in fact, never returned.

April 24th.—Upon inquiry the parents reported subsequently a progressive aggravation of this acute hydræmia, the last phase of which is marked by an absolute anorexia and incoercible vomiting. Five or six physicians have succeeded each other in the management of the case, but to no avail.

May 2d.—The family has finally consented to the removal of the child to the country, but with little or no hope of recovery, as the child, from what the father relates to me to-day, is considered very low.

May 8th.—Patient died, thoroughly exhausted from intense anæmia, and without, as her last attendant, Dr. Bayou informs me, having presented the slightest indication of any organic disease.

In reviewing these four cases the following features are most noticeable.

1. The association of these epistaxes with influenza, whether, as in Case IV., the hemorrhage takes place in the midst of an attack, or, as in the other three cases, it occurs during the decline or convalescence of the disease.

2. The coexistence in those cases of severe grippal epistaxes of a previous condition, in the bleeding nostril, of an obstructive character, localized in the rear part of the nasal chamber.

3. The danger of post nasal plugging, which should be abandoned in the treatment of most, if not all, such cases, in favor of a much more simple, more effective, and safer procedure—the continuous antero-posterior packing, with or without the preliminary use of the galvano-cautery.

Hemorrhagic complications have been sufficiently fre-

quent during the last epidemic of grippe to justify some observers in classifying such cases under the name of "hemorrhagic influenza." In view of the fact that acute coryza seems to be one of the most constant of the manifestations of influenza, it is to be wondered at that nasal hemorrhage has not been reported oftener in this disease. Its frequency has varied materially in different epidemics. We find that during the outbreaks of 1411, of 1580, of 1727, and of 1837, the occurrence of epistaxis was considered as a favorable symptom, while in 1743, according to Des Sauvages, the appearance of the nasal hemorrhage very often preceded or accompanied a fatal termination.

In 1782 (in Lunenburg) epistaxis would seem to have played the most important part in the symptomatology of the disease. As a matter of fact, epistaxis is very generally mentioned as a symptom in most all old reports of epidemics of grippe.

In 1889-90 several cases of epistaxis were observed by Dr. Paul Tissier, in the service of Professor Proust, at the Hôtel Dieu, of Paris. M. Comby cites examples (eighteen cases out of two hundred and eighteen) of repeated nasal hemorrhage in children. Jacobi says it is exceptional. Lublinski has observed in influenza a hemorrhagic rhinitis; A. Ruault and Mesnard have also seen epistaxis in the course of influenza. Herzog states that he has often met with that symptom. Nemier asserts that epistaxis at times shows the implication of the nasal fossæ. Haberman, Robinson, Cheminalde, and others call attention to this symptom, the bleeding in some cases being quite profuse and recurring at different times.

Holtz mentions the case of a strong and healthy man, thirty-six years of age, whose life appeared to be at one time in danger as a result of this complication. Dr. M. Litten, in the great recent work on influenza, published by the Society of Medicine of Berlin, writes, in the chapter on Symptomatology that "epistaxis was quite common during the epidemic (1889-90); it returned in cases

of relapse, and was sometimes so profuse that it was considered uncontrollable by the observers." Sokolowski, after mentioning that he has observed epistaxis in the course of different forms of influenza, adds, "The only complaint, even of two patients, was the profuse epistaxis, which lasted for several days. They applied for help on account of persistent nose-bleeding, from which they never before suffered."

These, with a very few others, are, as far as my knowledge and researches go, the few mentions made by observers of that manifestation. We must, therefore, admit that epistaxis, while not a very constant symptom, is still frequent enough in the various epidemics of influenza of which we have the narrative.

As to the time of appearance of grippal epistaxis, Tissier and others, like Robinson, state that it has generally shown itself, at least in the epidemic of 1889-90, as an initial symptom. Antony has seen it recur one month in the case of a soldier. In my four cases the nasal hemorrhage took place once in the course of the attack (Case IV.), and in the other three cases it must be considered as a sequela.

No late observer, outside of C. Fiessinger, has attached to the epistaxis any such influence as reported by the old writers on the evolution of influenza. He says that repeated epistaxes in the beginning or during the course of the disease seem to lead rapidly to a favorable termination. Some authors mention that, as in Case I., it has at times relieved a very painful symptom, viz., cephalalgia, or reduced the fever for the time being, as in Case IV.

Before discussing the question of the pathogenic diagnosis of these epistaxes and the mechanism of their production, permit me, gentlemen, to insist on the fact that in none of my cases did a careful examination reveal any visceral taint or any diathetic alteration, nor was there in the history of the patients any reference to hemorrhage,

with the exception of Case IV., previous to the attack of influenza. I am, therefore, justified in excluding from the pathogeny of these epistaxes such etiological factors as organic disease of the heart, chronic hepatic or renal alterations, hæmophilia, and many other general affections, which, we all know, will determine at times very serious nasal hemorrhage. I have often met with cases of this kind, two of them in connection with influenza, which I have studiously avoided to include in the above-mentioned ones, as besides influenza other well-known causes could be incriminated. Those observers who have, like myself, noted this complication in connection with grippe, have all been very reticent on its mode of production. As to myself, without pretending to link these hemorrhages to an absolutely defined pathogenic formula, I am inclined to believe that they reflect the impress of the infectious character of influenza, associated with the otherwise secondary element of stenosis. These hemorrhages would, according to that view, be due to the presence of pathogenic micro-organisms in the blood (if this etiology is the correct one) introduced through the respiratory tract. They would give rise to certain intra-nasal vaso-dilatations, which, in the already stenosed parts, would be more accentuated. It is possible that the microbes may generate toxines, which, through the nerve-centres, exert a direct irritant action upon the vasomotors at those weak points. The general blood dyscrasia would, therefore, like in other infectious fevers, have its share in the production of these epistaxes. These views I must, however, admit are as yet purely theoretical, and must remain as such until the specific germ of influenza is discovered and reproduced to the entire satisfaction of bacteriologists.

While admitting the primary influence and importance of the grippal infection in the production of these epistaxes, which is, by the way, the only manner in which to account for other hemorrhages, as reported in the last

epidemics of influenza, I cannot overlook another feature as presented in my observations, viz., the fact that the bleeding invariably proceeded from a more or less stenosed nostril; the roomier nostril, free of septal deformity, played no part in the production of the hemorrhage. As to its seat, it was clearly defined by rhinoscopic examination; in three of my cases it did not originate at the antero inferior part or at the centre of the quadrangular cartilage, the point of election in the great majority of cases, as established by the researches of Chiari, Voltolini, Baumgarten, Kiesselbach, Calmeltes, and many others, and as confirmed by daily experience. I therefore feel justified in considering the stenosis as a factor in the production of the hemorrhage, to this extent at least, that it has allowed the intra-nasal vaso-dilatation due to the influenza to so intensify the obstruction as to cause an attrition of the opposing surfaces, and subsequently an erosion of the parts, especially over the crest of the projecting septal spur. On this point I can only agree with Dr. Bosworth, as against the views of Jurasz and others, when, referring, it is true, to the anterior part of the nostrils, he writes: "Slight deformities of the septum are probably the cause and source of an epistaxis more frequently than any other lesion met with in the nasal cavity, the apex of the projecting portion becoming the seat of a slight erosion, probably as the result of attrition by the dust-laden currents of the inspired air."

A few words now, gentlemen, before closing my remarks, on the question of post-nasal tamponning, which, as demonstrated in Cases I. and II., and although performed by skilful surgeons, has evidently led to very unpleasant and very dangerous complications. I would certainly not mention this antiquated procedure before a meeting of specialists, but for the fact that it is unfortunately too generally advocated in text-books on general surgery, and, I regret to say, even by some writers on our specialty, like McBride, W. Spencer Watson, and

others. As to myself, I firmly believe, with Chatelier, that there are very few cases, if any, of epistaxis of such a character as to compel us to revert to post-nasal plugging. Leaving aside the hemorrhages of grippal origin, I have had to attend six other cases of very serious epistaxis from different causes. In all of them I have been uniformly successful in arresting the hemorrhage by the method of continuous antero-posterior packing, and in none of them have I had to register any unpleasant complications. I would further emphasize the comparative innocuity of the method by stating that I have very often resorted to this mode of dressing after prolonged intranasal operations in the posterior half of the nostrils, without any untoward effect directly attributable to the method, notwithstanding the fact that the gauze was left in place several days.

In order to insure this immunity from complications, due attention must be paid, 1st, to the preliminary disinfection of the nostril; 2d, to the packing material employed, strips of iodoform gauze being the best, as suggested several years ago by Fletcher Ingalls; 3d, to the proper anæsthesia of the nostrils with a solution of cocaine, which is also a good hæmostatic; 4th, to the continuity of the packing, which allows of no accumulation or retention of blood or of secretion apt to undergo decomposition.

In concluding this contribution, and judging from the serious character of nasal hemorrhages in these four observations, I could infer, as against the opinion of most other observers, that epistaxis of grippal origin presents an unusual gravity; do not understand me, however, as formulating such a diverging opinion. I can only say in explanation of this gravity, that I must have met, as we all do in practice, with an unlucky series, and that such cases must be considered exceptional in the history of epistaxis of grippal origin.

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